

IN THE CLAIMS:

Amend claims 1, 2, 6, 9, and 10 to read as follows:

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1. (Once Amended) A method of scanning a field of view of an imager across a field of regard using a scan mirror mounted on a gimbal having an inner axis and an outer axis, the method comprising:

sweeping the field of view across the field of regard in a selected direction by rotating the gimbal about the inner axis while maintaining the gimbal at a fixed angle with respect to the outer axis;

progressing to a subsequent scan position by rotating the gimbal about the outer axis by a predetermined increment angle while maintaining the gimbal at a fixed angle with respect the inner axis;

repeating the act of sweeping such that the selected direction is chosen alternately from a first direction and a second direction that is opposed to the first direction; and

repeating the act of progressing prior to each repeated act of sweeping;

wherein there is substantially no rotation, with respect to the instantaneous direction of scan, of an image formed on the imager.

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2. (Once Amended) An apparatus for scanning a two dimensional field of regard, the apparatus comprising:
a telescope having a focal plane and a field of view;
one or more image sensors disposed at the focal plane;
a single optically flat mirror disposed in the object space of the telescope;

wherein the flat mirror sweeps the field of view continuously across the field of regard while maintaining a fixed relationship between the rotational direction of scan and the projection of the telescope's focal plane.

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6. (Once Amended) An apparatus for scanning a two dimensional field of regard, the apparatus comprising:
a telescope having a focal plane and a field of view;
one or more image sensors disposed at the focal plane;
a single optically flat mirror disposed in the object space of the telescope; and

a gimbal having an inner axis and an outer axis, the flat mirror being mounted on the gimbal;

wherein the flat mirror scans the field of view across the field of regard while maintaining a fixed relationship between the rotational direction of scan and the projection of the telescope's focal plane; and

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wherein the field of view covers the two dimensional field of
regard via a series of conical arcs, each arc being scanned by
rotation about the inner axis of the gimbal.

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9. (Once Amended) The apparatus of claim 7, wherein
rotation about the outer axis of the gimbal is fixed during the
active scanning portion.

10. (Once Amended) The apparatus of claim 7, wherein
rotation about the inner axis of the gimbal remains substantially
fixed during the vertical deflection interval.
